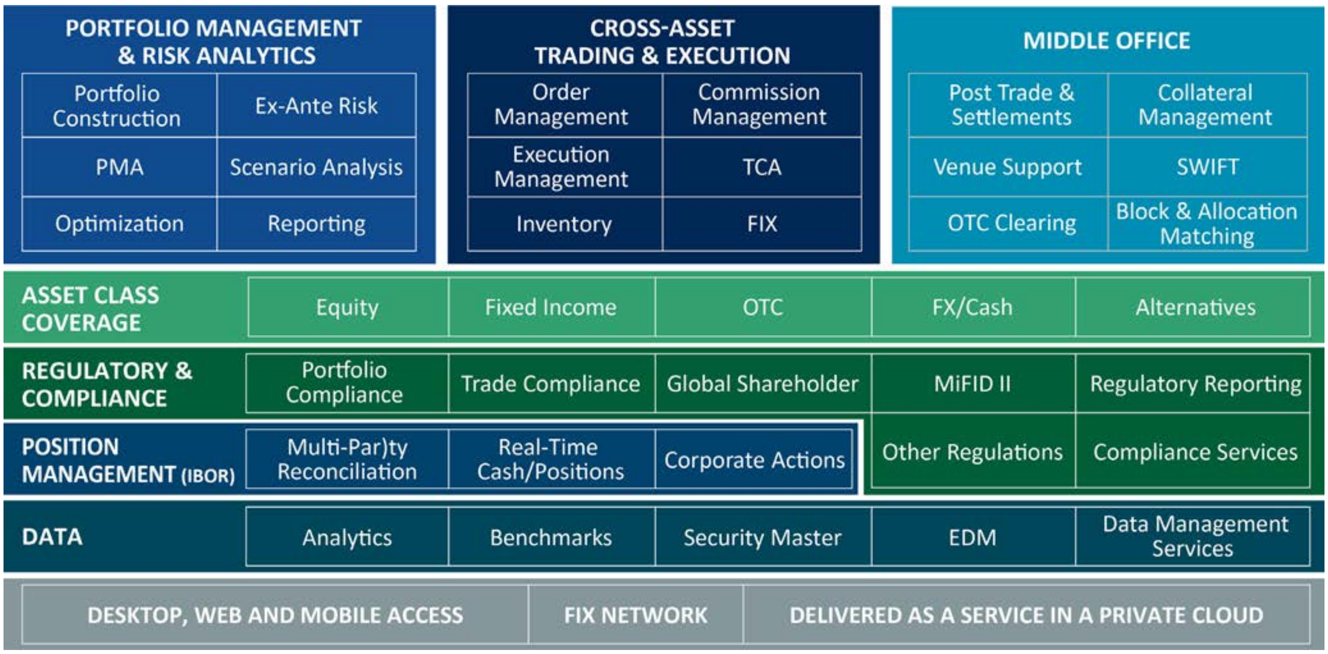
Charles River

Investment Management Solution

crd.com

Charles River Investment Management Solution

Charles River IMS automates front and middle office investment management functions for buy-side firms in the institutional asset and fund management, private wealth, alternative investments, insurance, banking and pension markets. Charles River helps clients make better investment decisions, streamline operations and reduce risk.



For 20+ Years

Charles River has distilled the best practices from a diverse, global client base and incorporated them into the Charles River Investment Management Solution (Charles River IMS). With a long term view and singular focus on the front and middle office, Charles River has helped large and small firms achieve:

- Better informed investment decisions
- An enterprise-wide view of investments and exposures
- Accurate, timely and consistent data across the investment process
- Consolidation of disparate point solutions on a single platform

Today

Investment firms in more than 40 countries use Charles River IMS to manage more than US$25 Trillion in assets in the institutional investment, wealth management and hedge fund industries. Clients rely on Charles River to:

- Improve trade execution
- Monitor & reduce risk
- Simplify & streamline operations

Tomorrow

In an environment of ever-changing markets, competitive and regulatory pressures, Charles River continues to invest heavily in R&D to help clients:

- Grow and retain assets through continuous innovation
- Diversify and expand products and geographic coverage
- Keep up with regulatory requirements

End-to-End Investment Lifecycle Support

Charles River IMS supports the entire investment lifecycle on one platform, from portfolio management and risk analytics to trading and post-trade settlement, with the broadest available asset class coverage and integrated compliance throughout.

An Investment Book of Record (IBOR) further improves efficiency and accuracy by removing dependence on back-office data feeds. Charles River's Enterprise Data Management (EDM) capabilities help firms improve the consistency and completeness of their reference, analytics, pricing, and benchmark data.

Key Advantages

- **Make better investment decisions**
- **Improve trade execution**
- **Streamline middle office operations**
- Reduce cost, risk & complexity
- Increase end user productivity & satisfaction
- Launch new products faster

Software as a Service (SaaS) Deployment

Charles River IMS is delivered as a hosted service, with integrated data and end user support, enabling clients to access the latest functionality faster, improve data quality, and streamline operations. This simplified Software as a Service (SaaS) operating model helps clients respond more quickly to business, investor and regulatory demands. This increases end user satisfaction, ensures more predictable costs, and helps improve reliability.

The SaaS-based offering includes seamless upgrades and 24/7, follow-the-sun support provided by Charles River's in-house support staff. Most importantly, Charles River provides the proper foundation for the investment process by providing, validating and managing all necessary data.

One Platform for Multiple Business Lines

Charles River IMS combines best of breed components in a platform that meets the diverse and demanding requirements of buy-side firms, including:

- Institutional asset and fund managers
- Alternative investment managers and hedge funds
- Private banks and wealth managers
- Pensions and insurers

Best practice workflows help improve staff productivity, and a highly scalable and configurable open architecture enables clients to consolidate multiple business lines on a single platform. Charles River IMS supports the full spectrum of financial product offerings, from basic asset class-specific products to solution oriented and complex multi-asset products.

Anytime, Anywhere Access

Charles River provides flexible end user deployment options and easily scales to support thousands of users. In addition to desktop deployment, a configurable browser-based dashboard allows financial advisors to quickly personalize information for managing complex accounts and high-touch client relationships. Advisors and client-facing users can make in-person meetings more interactive by using tablets as graphical reporting and presentation tools. Charles River's mobile app provides remote access and gives users a "big picture" view into Charles River IMS when away from the office.

Charles River offers seamless browser-based and mobile device access to portfolios, exposures and trades, and desktop deployment for enterprise workflows.

Market Segments

Institutional Asset & Fund Management

By managing separate funds and investment products on a single enterprise solution, firms are able to automate their investment process, streamline workflows and reduce the points of integration that contribute to inefficiencies and errors:

Improve decision making with centralized portfolio construction, management and analysis

Increase trader productivity with a single order and execution management system

Access risk management, scenario analysis, and attribution directly from the portfolio management workspace

Automate compliance checking throughout the investment lifecycle

Key Advantages

- Grow & retain assets
- Diversify products
- Expand geographies
- Keep up with regulatory requirements
- Simplify systems & operations
- Reduce risk & cost

Wealth Management

Charles River provides institutional capabilities that support discretionary and non-discretionary private wealth product lines, enhance client interactions, and efficiently manage large volumes of accounts and trades:

Speed introduction of new products with built-in support for all asset classes, including unit trusts, ETFs, futures, options and fixed income

Support region-specific frameworks and products, such as SMA, UMA, UMH, Rep as Manager, and Mutual Fund Wraps

Effectively implement investment strategies using characteristic-based allocation models and custom benchmark portfolios

Ensure tax-efficient portfolios and tax optimization across households

Maintain a holistic view of family assets, including household and multi-generation views

Improve throughput by rebalancing high volumes of separately managed, unified and household accounts

Enrich client presentations with graphical reports on mobile devices

Alternative Investment Management & Hedge Funds

Charles River's enterprise solution meets the requirements of both large and small organizations, enabling alternative investment managers to:

Create and manage multiple strategies and sub-strategies with institutional capabilities across all asset classes, including derivatives & FX

Minimize ramp-up time with out-of-the-box templates for quick set-up and flexible configuration of user interfaces and workflows

Support active management styles with portfolio analytics and execution capabilities, providing a global view of investment performance and risk, and the ability to monitor P&L in real time

Alleviate staffing and infrastructure pressures with a turnkey solution that simplifies day-to-day operations and scales with business needs

Streamline regulatory obligations such as global shareholder disclosure (GSD) reporting with automated compliance checking and built-in libraries

A Simplified Operating Model

SaaS-based deployment provides clients with significantly faster access to new capabilities and ensures the necessary data for Charles River IMS. Clients can leverage the economy of scale in Charles River's global support teams and the expertise that comes from supporting a diverse client base. Having a single point of contact for software, hardware, data and connectivity saves time and improves accountability.

Data Services & Support

Investment management systems consume enormous quantities of data, and ensuring consistent data quality is one of the biggest challenges for buy-side firms. Managing ever-growing data volumes across instrument types is an industry-wide problem that is compounded by frequent changes and quality issues with data providers. Charles River alleviates data problems by providing an all-inclusive data solution incorporating:

The Charles River Data Service using best of breed providers, that maps and enriches reference and real-time data, and supports new security setup

Certified interfaces that work out-of-the-box and are continuously maintained and managed by Charles River to Bloomberg, Thomson Reuters, and IDC.

An Investment Book of Record (IBOR) to ensure an accurate view of positions and cash throughout the trading day

Additional providers based on asset class with standardized integration and support (e.g., FinCAD analytics) and mortgage pre-payment models

Enterprise Data Management (EDM) facilities to manage, monitor and promote gold copy data within Charles River IMS and to other systems

A data management service to ensure a high quality security master

Charles River helps reduce data costs, technical issues and administrative headaches by managing the entire data process for clients, aggregating all necessary data and incorporating it directly into the Charles River IMS for over a thousand data fields.

SaaS-based Delivery

Charles River keeps software current by managing regular upgrades and ensuring optimal application performance and reliability. Application specialists manage Charles River IMS according to best practices, and provide application and integration expertise that is difficult for firms to build and maintain in-house.

Compliance Advisory Services

Charles River's compliance services team provides a level of knowledge and depth of skills difficult to maintain with in-house staff alone. Compliance Advisory Services act as an extension of the client's compliance organization to ensure that their compliance rules and workflows are efficient, follow accepted best practices and align with client mandates and regulatory requirements.

Key Advantages

- **Up-to-date software and technology**
- **Better data quality & accuracy**
- **Improve day-to-day operations**
- **Minimize staff requirements & training**
- **Lower technology costs**
- **ISO 27001 security certified globally**

FIX Connectivity

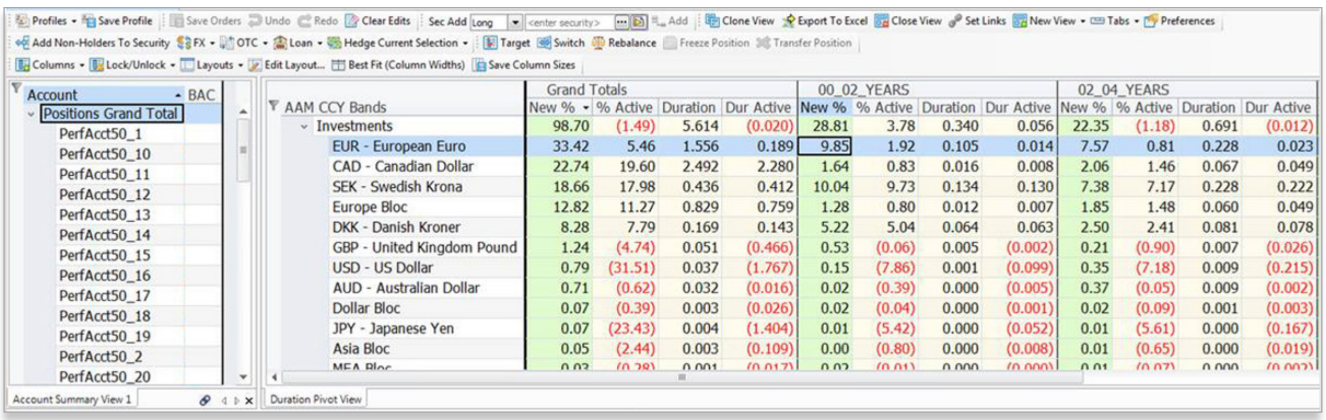
Charles River's broker-neutral financial network supports global electronic trading via FIX with access to over 600 global liquidity venues. Full integration facilitates direct access between buy-side clients, sell-side brokers and trading venues to simplify operations and improve trading reliability. Charles River provides complete FIX administration, connectivity management and support. Continuous testing, certification and monitoring of sell-side end points increases service levels and end user satisfaction.

Portfolio Management

Charles River IMS provides extensive portfolio management and analytics for fixed income, equity, FX and derivatives on one platform with integrated data. Data visualization and aggregation capabilities and best practice workflows provide portfolio managers with a readily familiar tool that is easy to use and frees them from dependency on spreadsheets. Integrated performance measurement and risk management provide real time visibility into performance and risk exposure. Scenario analysis and advanced analytical capabilities help portfolio managers understand investment risks.

Key Capabilities

- Portfolio construction
- Asset allocation & rebalancing
- Ex-ante risk
- Value-at-Risk (VaR)
- Scenario analysis
- Ex-post risk
- Performance measurement & attribution



AAM CCY Bands	Grand Totals				00_02_YEARS				02_04_YEARS			
	New %	% Active	Duration	Dur Active	New %	% Active	Duration	Dur Active	New %	% Active	Duration	Dur Active
Investments	98.70	(1.49)	5.614	(0.020)	28.81	3.78	0.340	0.056	22.35	(1.18)	0.691	(0.012)
EUR - European Euro	33.42	5.46	1.556	0.189	9.85	1.92	0.105	0.014	7.57	0.81	0.228	0.023
CAD - Canadian Dollar	22.74	19.60	2.492	2.280	1.64	0.83	0.016	0.008	2.06	1.46	0.067	0.049
SEK - Swedish Krona	18.66	17.98	0.436	0.412	10.04	9.73	0.134	0.130	7.38	7.17	0.228	0.222
Europe Bloc	12.82	11.27	0.829	0.759	1.28	0.80	0.012	0.007	1.85	1.48	0.060	0.049
DKK - Danish Kroner	8.28	7.79	0.169	0.143	5.22	5.04	0.064	0.063	2.50	2.41	0.081	0.078
GBP - United Kingdom Pound	1.24	(4.74)	0.051	(0.466)	0.53	(0.06)	0.005	(0.002)	0.21	(0.90)	0.007	(0.026)
USD - US Dollar	0.79	(31.51)	0.037	(1.767)	0.15	(7.86)	0.001	(0.099)	0.35	(7.18)	0.009	(0.215)
AUD - Australian Dollar	0.71	(0.62)	0.032	(0.016)	0.02	(0.39)	0.000	(0.005)	0.37	(0.05)	0.009	(0.002)
Dollar Bloc	0.07	(0.39)	0.003	(0.026)	0.02	(0.04)	0.000	(0.001)	0.02	(0.09)	0.001	(0.003)
JPY - Japanese Yen	0.07	(23.43)	0.004	(1.404)	0.01	(5.42)	0.000	(0.052)	0.01	(5.61)	0.000	(0.167)
Asia Bloc	0.05	(2.44)	0.003	(0.109)	0.00	(0.80)	0.000	(0.008)	0.01	(0.65)	0.000	(0.019)

With Charles River's centralized workspace, portfolio managers can easily view their accounts, drill down to holdings, and display multiple concurrent views of the same accounts.

Fixed Income

Charles River IMS provides portfolio analysis tools and analytics for standard and emerging corporate bond markets, a comprehensive set of government bond types from more than 50 countries, plus fixed income derivatives, including interest rate and credit default swaps, forwards, futures and options. Fixed income views can group portfolios by multiple classifications, including sectors, ratings, issuers and duration bands, with flexible drill-down, enabling portfolio managers to:

Evaluate portfolio strategies by conducting benchmark comparisons and dispersion analysis

Manage risk leveraging Charles River's powerful built-in analytics tools and third-party sources for exposure management, sensitivities, risk analytics, stress testing, ex-post risk, Value-at-Risk (VaR) and ex-ante risk

Understand portfolio-level impact before generating orders by proposing on either a "what if" or "generic" basis

Equity

Charles River's portfolio analysis tools support equities and equity derivatives, including futures, options, and total return swaps. Portfolio managers can implement active and passive investment strategies using asset allocation and security selection tools. Workflows can be optimized for one or many portfolios using customizable views to:

Efficiently manage holdings by targeting on country, region, currency, industry/sector, and market capitalization roll-ups

Fulfill organizational and fund mandates by rebalancing portfolios or utilizing cash invest/divest capabilities to align positions with their respective model or index

Determine risk impact of potential orders by conducting hypothetical "what-if" analysis

Optimize operations by automatically factoring client-specific restrictions into all order generation activities

Advanced Capabilities

- Strategy/model management
- Currency overlay management & hedging
- Instrument exposure look-through
- Investment Book of Record for accurate holdings information

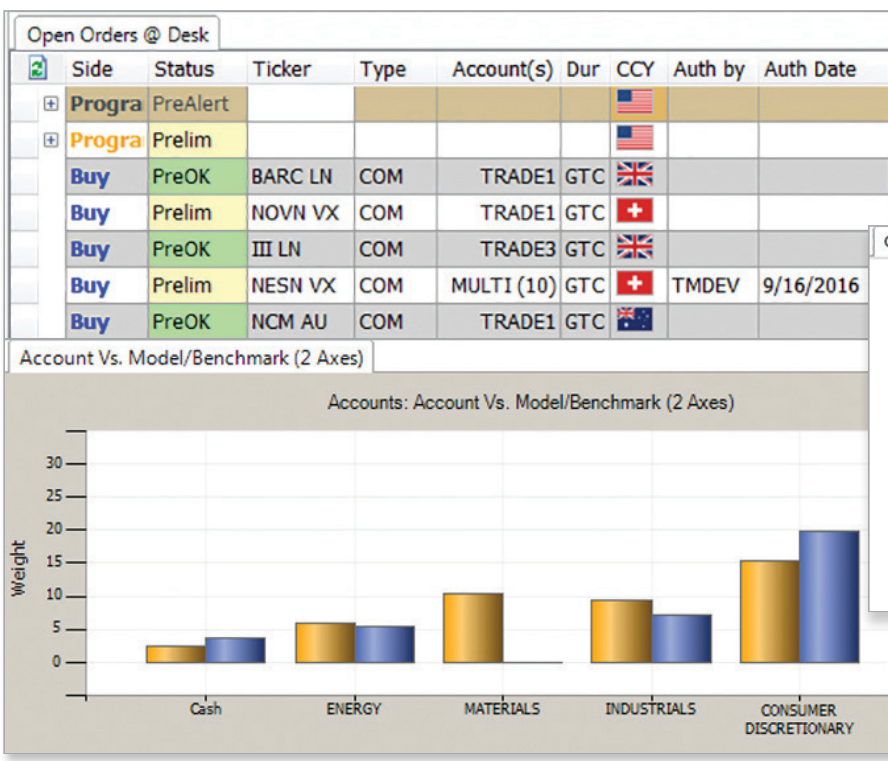
Foreign Exchange

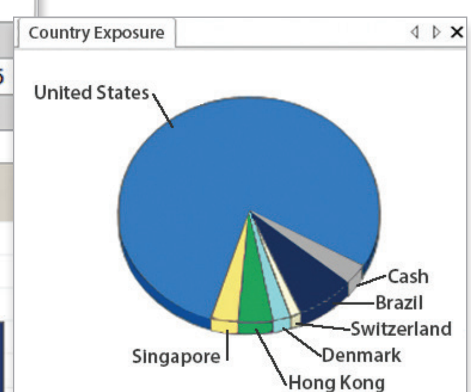
Full multi-currency support allows portfolio managers to view any portfolio in any currency, using real-time FX rates, enabling them to:

Effectively manage and hedge currency risk with currency overlay

Quickly assess FX/hedging needs with currency-based settlement day forecasting and flexible viewing options (by asset currency, currency clusters, across portfolios, etc.)

Fine-tune currency exposure by consolidating/rolling forward positions





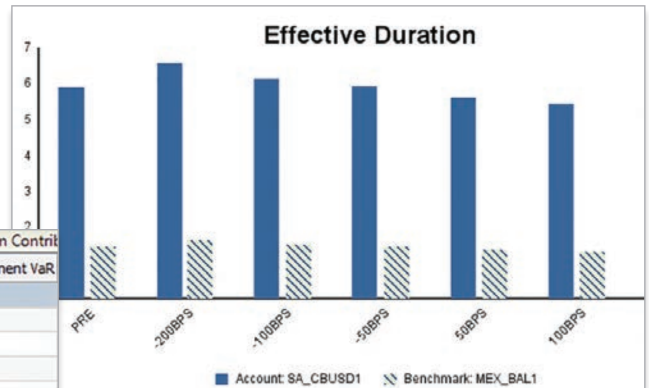
Flexible tools enable portfolio managers to classify their holdings and implement investment decisions for one or many portfolios, align positions with benchmarks or models, and monitor the status of orders across the trading desk.

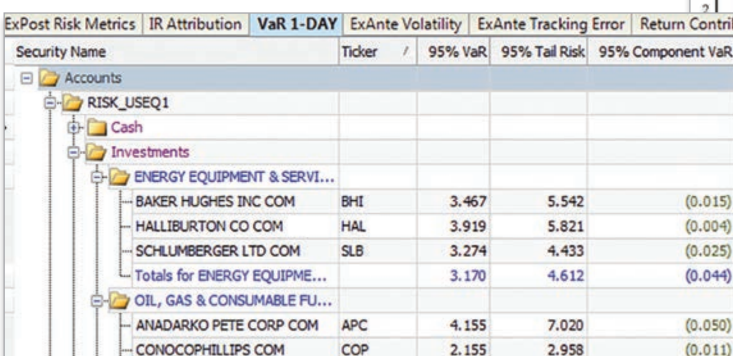
Comprehensive multi-currency and FX support help portfolio managers manage currency exposure across global portfolios.

Risk Management & Scenario Analysis

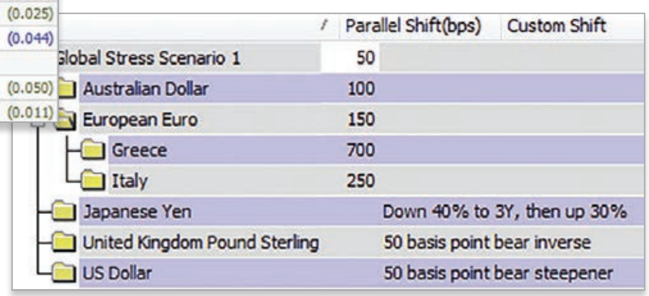
Integrated risk management and scenario analysis functions enable firms to meet client and regulatory demands for greater transparency and stricter guidelines throughout the investment process. Charles River IMS provides portfolio managers, risk managers and compliance officers with curve-based analytic measures, ex-post and ex-ante risk metrics, accessible directly from portfolio management workflows and reports.

With Charles River IMS, risk measurement and modeling become an integral part of daily portfolio management activities, using the same data and metrics as quants and risk analysts.




ExPost Risk Metrics | IR Attribution | VaR 1-DAY | ExAnte Volatility | ExAnte Tracking Error | Return Contrib

Security Name	Ticker	95% VaR	95% Tail Risk	95% Component VaR
Accounts				
RISK_USEQ1				
Cash				
Investments				
ENERGY EQUIPMENT & SERVI...				
BAKER HUGHES INC COM	BHI	3.467	5.542	(0.015)
HALLIBURTON CO COM	HAL	3.919	5.821	(0.004)
SCHLUMBERGER LTD COM	SLB	3.274	4.433	(0.025)
Totals for ENERGY EQUIPME...		3.170	4.612	(0.044)
OIL, GAS & CONSUMABLE FU...				
ANADARKO PETE CORP COM	APC	4.155	7.020	(0.050)
CONOCOPHILLIPS COM	COP	2.155	2.958	(0.011)



	Parallel Shift(bps)	Custom Shift
Global Stress Scenario 1	50	
Australian Dollar	100	
European Euro	150	
Greece	700	
Italy	250	
Japanese Yen		Down 40% to 3Y, then up 30%
United Kingdom Pound Sterling		50 basis point bear inverse
US Dollar		50 basis point bear steepener

Flexible scenario definitions help investment managers analyze the full spectrum of conditions and stress events as defined by regulators or anticipated by portfolio managers.

Make more informed decisions by viewing key rate durations and sensitivities to other analytical factors for the entire portfolio and benchmark, calculated natively

Stress-test portfolios by specifying interest rate and credit scenarios; view effects on the portfolio and benchmark for portfolio fair value, yield, duration and other analytics

Centralize risk management via seamless integration with Charles River's compliance functions automates risk monitoring across the enterprise

Increase visibility of ex-post and ex-ante risk metrics including risk contribution and attribution for tracking error, volatility, variance, information ratio, beta; summary risk measures include Jensen's alpha, Sharpe ratio, Treynor ratio, Sortino ratio, downside risk and others; calculate Value-at-Risk (VaR) using historical simulation, as well as ex-ante volatility and tracking error (TE) using Charles River's statistical factor model or a third party factor model

Performance Measurement & Attribution

Charles River IMS enriches the portfolio management process with up-to-date performance measurement and attribution analysis (PMA) and facilitates GIPS compliance, without the need to integrate a standalone PMA system. Users can directly access all return, contribution, attribution and risk data for each portfolio, for a variety of timeframes and user-defined classification levels. Charles River reference and pricing data reduces operational complexity and helps ensure a consistent view of performance and attribution across the firm. Users can also perform backward-looking performance analyses for any historical time period or account using multiple search criteria.

Eliminate standalone systems with fixed income and equity performance and attribution on a consolidated platform

Provide context for decision making by analyzing results directly within the portfolio management workspace or via reports

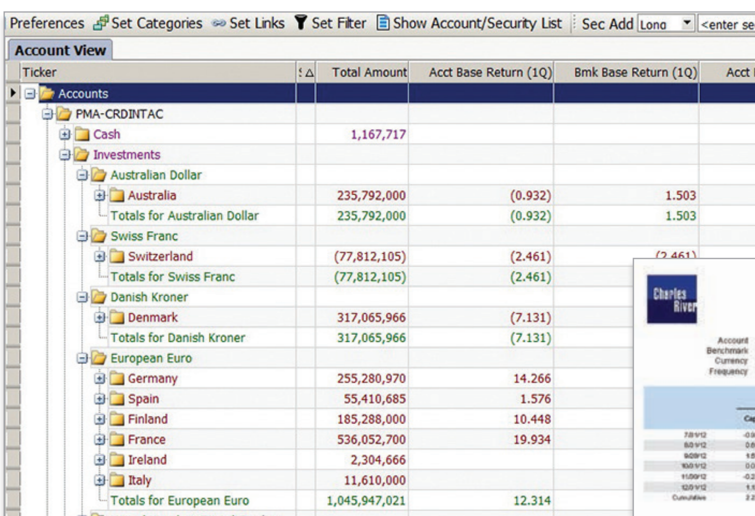
Streamline workflows with “look-through” calculation down to the individual security level and dynamic recalculation of results when methodologies and classifications are changed on the fly

Reflect investment objectives and/or strategies using custom blended benchmarks

Automatically reconcile performance contribution, attribution and ex-post risk data by eliminating multiple data feeds from disparate systems

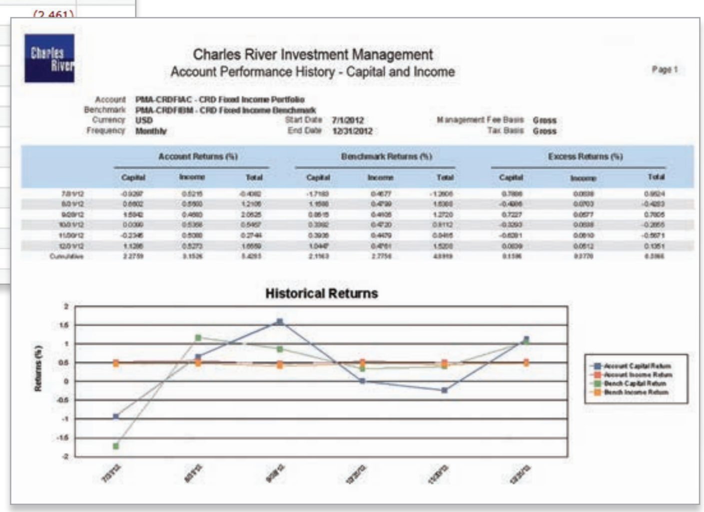
Reduce “noise” and inaccuracies by easily restating performance data (price changes, corporate actions, etc.)

Automate GIPS support with rules to maintain GIPS composite memberships; standard reports include firm and composite disclosures



Configurable workbench views consolidate performance contribution, attribution and ex-post risk results for portfolio managers.

Performance reports provide detailed breakdowns of performance figures and summarize results in bar or trend charts that can be viewed from Charles River IMS or a web browser.



Trading & Execution

With Charles River's combined order and execution management system (OEMS), traders can work more productively by creating, placing and executing orders in one trading blotter. Traders can manage trade execution strategies, streamline complex workflows into "one-click" execution, act on an entire program as if acting on a single order, and monitor market data and active orders. Full integration with portfolio management functions enables better communication between traders and managers. Interfaces with sell-side and execution venues support cross-asset class coverage.

Key Capabilities

- Order & execution management
- Data charting & visualization
- Trading analytics & transaction cost analysis (TCA)
- Broker & commission management

Charles River's trading blotter offers numerous advantages over discrete order and execution systems. Traders can work more efficiently by eliminating multiple interfaces, fragmented workflows and order staging problems inherent in utilizing separate order and execution platforms. Traders no longer have to switch between systems or re-key critical information, which saves time and reduces errors. Benefits beyond the trading desk include improved compliance and auditing, and greater collaboration between traders and portfolio managers.

Fixed Income

Charles River IMS improves trader decision making with quick and efficient workflows and built-in quote management. Traders can find liquidity and negotiate with counterparties, monitor the market, and execute both cash and derivative trades, with:

Comprehensive asset class support including government, investment grade, high yield, municipal, structured, inflation-linked, emerging market debt, TBA, and listed and OTC derivatives

Accurate and up-to-date security information, including benchmarks and curves, with tight integration to fixed income market data providers

Integration with leading fixed income ECNs, allowing traders to stage orders and receive completed trade details after execution

Advanced trading capabilities including generic order handling, multiple-quote support, streamlined booking of complex swaps, trading on price, yield, spread, swap rate and deal spread

Charles River's configurable trading blotter automates manual processes with integrated quoting and built-in access to trading platforms.

Equity

Equity traders require quick access to all relevant data and liquidity. Charles River's intuitive trading blotter encompasses all the key workflows for equity cash and equity derivative orders, including:

Easy access to fundamental trading analytics at all stages of the trade lifecycle, with integrated transaction cost analysis (TCA) from order generation through execution

Support for multiple trading methods and strategies including program trading, single name trading, algorithmic trading, DMA trading and spread trading

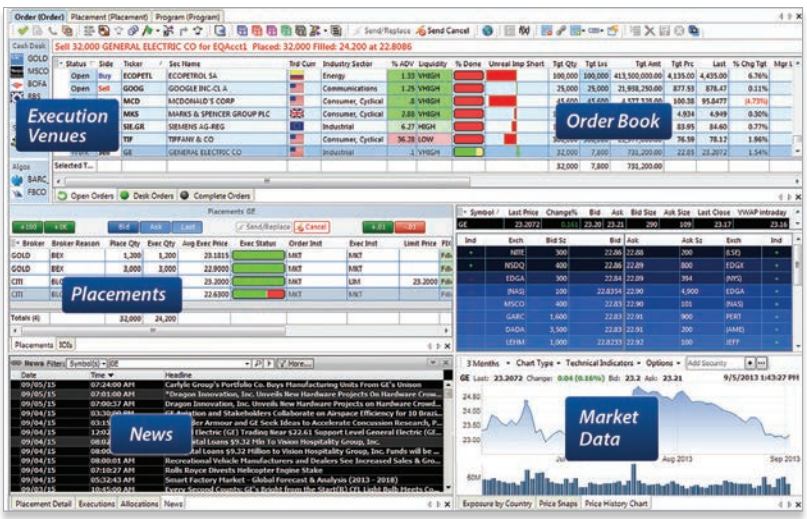
Freedom to focus attention on more complex, less liquid orders by utilizing automated smart order routing for low touch orders

Integrated critical market data and charting, including real-time level I and level II exchange data, price history, news, watchlists, time and sales, and venue analysis

Built-in access to liquidity with a broker-neutral FIX network, providing connectivity to more than 600 trading destinations and ability to quickly add new destinations

Key Capabilities

- Real-time market data
- Automated smart order routing
- Program/list trading
- Algo trading
- Multi-leg spread trading
- DMA trading
- Venue analysis
- Pre- & post-trade TCA

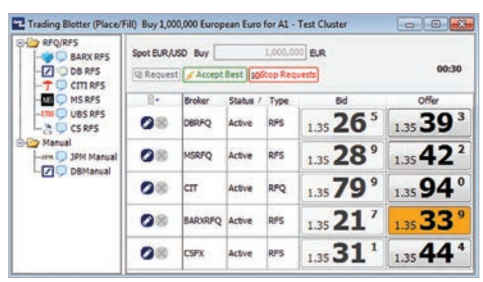


Charles River brings together the tools and data traders need to effectively implement trading strategies.

Foreign Exchange

Charles River's automated FX capabilities help investment managers hedge out currency exposure and risk, and reduce the cost of settlement for cross-border trading. Charles River enables firms to manage their own FX trades with a highly efficient workflow that easily links FX trades back to the original equity, fixed income or derivative trade, and ultimately reduces costs with:

Charles River helps traders achieve best execution by gathering multiple quotes and automatically identifying the best rate.



Fully automated settlement and hedging trades based on pre-defined settlement and hedging rules

Complete transparency into portfolio cash through full integration to cash flow forecast

Direct access to multiple liquidity destinations including bank direct, ECNs and bank algorithms

Streamlined access to the best rate through streaming quotes (RFQ/RFS)

Best execution analysis and reporting, including the ability to store historical quotes

Compliance

Charles River helps clients meet increasing regulatory obligations with centralized compliance monitoring and management capabilities, and advisory services that utilize a comprehensive library of built-in rules for worldwide regulatory requirements and mandates, including US SEC 1940 Act and Rule 2a-7, UCITS and ESMA, MiFID II, Dodd-Frank, KAGB, global shareholder disclosure (GSD) regulations and others. Charles River IMS automates the compliance workflow and provides advanced compliance rule building, testing and maintenance, customizable reporting and a complete audit history, including the ability to:

Reduce intra-day risk by validating compliance at any stage of the trade lifecycle: pre-trade, in-trade, post-execution, end-of-day/post-trade

Streamline portfolio management workflows by incorporating compliance rules into "what-if" analysis

Optimize compliance monitoring by prioritizing and filtering alerts

Easily trace violations and perform historical trend analysis through "As of" compliance reporting

Supply regulators and auditors with end-to-end audit trails and extensive trade compliance reporting

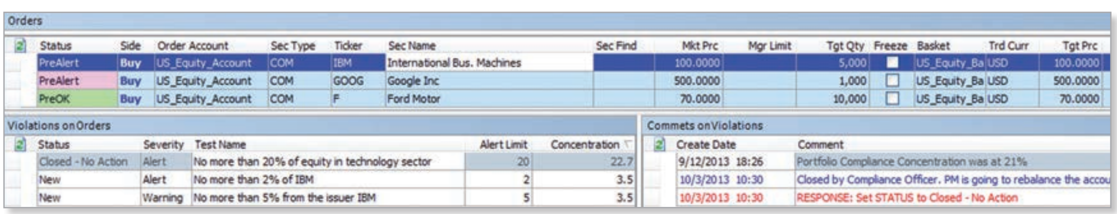
Improve responsiveness to alerts and warnings via browser or mobile device

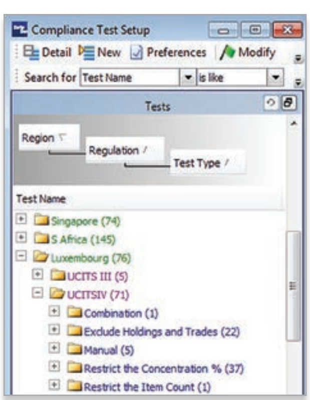
Stay current with best practices, client mandates and regulatory requirements by leveraging Charles River's Compliance Rule Advisory Service and Global Shareholder Disclosure Service

Key Capabilities

- Compliance monitoring over investment lifecycle
- Comprehensive rule libraries
- Rule building & testing
- Model compliance
- Advisory & Global Shareholder Disclosure Services
- "As of" compliance
- Derivative exposure calculations
- Calculation builder
- Integrated VaR monitoring
- "Four Eyes" test authorization

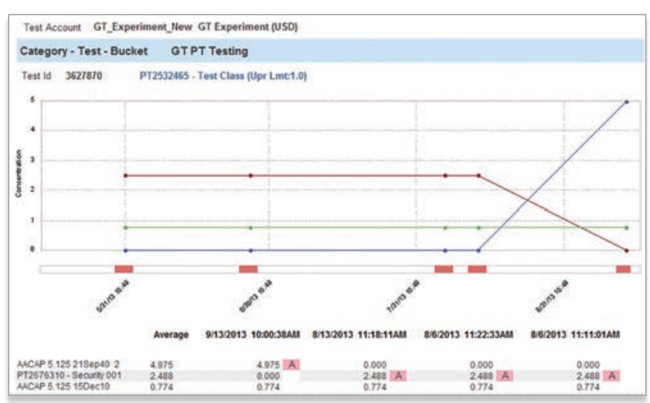
Charles River automates compliance validation and monitors risk across the trade life cycle.





Rich repository of compliance rules and advanced rule-building tools provide diverse instrument and regulatory support.

Comprehensive reporting tools, including historical trend analysis and "As of" reporting, provide documentation needed for regulatory or audit inquiries.



Middle Office

Post-Trade Matching, Confirmation & Settlement

Charles River automates the post-trade process and provides centralized confirmation, trade matching and settlement instruction workflows. For each transaction, dealers and traders, portfolio managers, compliance, and operations personnel have the same real-time view of all post-trade processing activity and data. The resulting low-touch settlement process minimizes manual steps and enables investment managers to:

Expedite settlement by routing individual trades and allocations in real-time to facilitate same-day matching and confirmation

Reduce failed trades and settlement issues with consistent views of post-trade activity and data

Manage "by exception" with personalized views and alerts that save time and speed up corrective intervention

Key Capabilities

- Collateral Management
- Block & allocation matching
- Accounting import/ exports
- OTC clearing
- Reconciliation
- Automated straight through processing
- Exception management
- SWIFT communication with custodians

Charles River IMS automatically routes transaction details and ensures central or local matching with flexible exception management and configurable, rule-based local tolerance matching. Built-in interfaces include:

- Omgeo OASYS, CTM & TradeSuite
- MarkitSERV swap clearing
- FIX 4.2 or 4.4 allocation workflow
- Local match/affirm with any destination
- ISO 15022/SWIFT for custodian notification

Investment Book of Record (IBOR)

Charles River's Investment Book of Record provides traders and portfolio managers with an accurate and real-time view of positions and cash. IBOR provides an investment-centric view of positions that reduces trade errors and time spent manually reconciling position data.

Charles River increases confidence in investment decisions by providing consistent position data and actionable analytics throughout the investment process. IBOR makes position data available to downstream systems including reporting, performance attribution and risk management, enabling them to access the same view of positions in real time.

Key Capabilities

- Audit trail of transactions and positions
- Exception based position reconciliation
- Supports mandatory & voluntary corporate actions
- Full security lifecycle support

Incorporating IBOR in Charles River IMS enables organizations to decouple the front and back office, and helps firms that do not have an accounting system and rely solely on feeds from custodians and prime brokers. It also benefits wealth managers who need to consolidate positions from multiple accounting systems, or control tax lot tagging for newer multi-sleeve or multi-strategy products. Charles River's IBOR solution allows users to:

Improve accuracy and reduce end-of-day processing time by eliminating dependency on back office data

Reduce the possibility of trading errors and compliance violations by ensuring that managers are trading on complete information

Help portfolio managers remain fully invested by providing accurate intraday cash balance information

Increase transparency and improve record keeping by incorporating external transactions that affect positions

Wealth Management

Charles River offers financial advisors, private banks and wealth managers a comprehensive and fully integrated solution that eliminates the need for multiple systems. Solution capabilities include mobile and browser based access, highly performant central overlay, multi-custodial position management, detailed performance analysis, and a communication hub.

Key Advantages

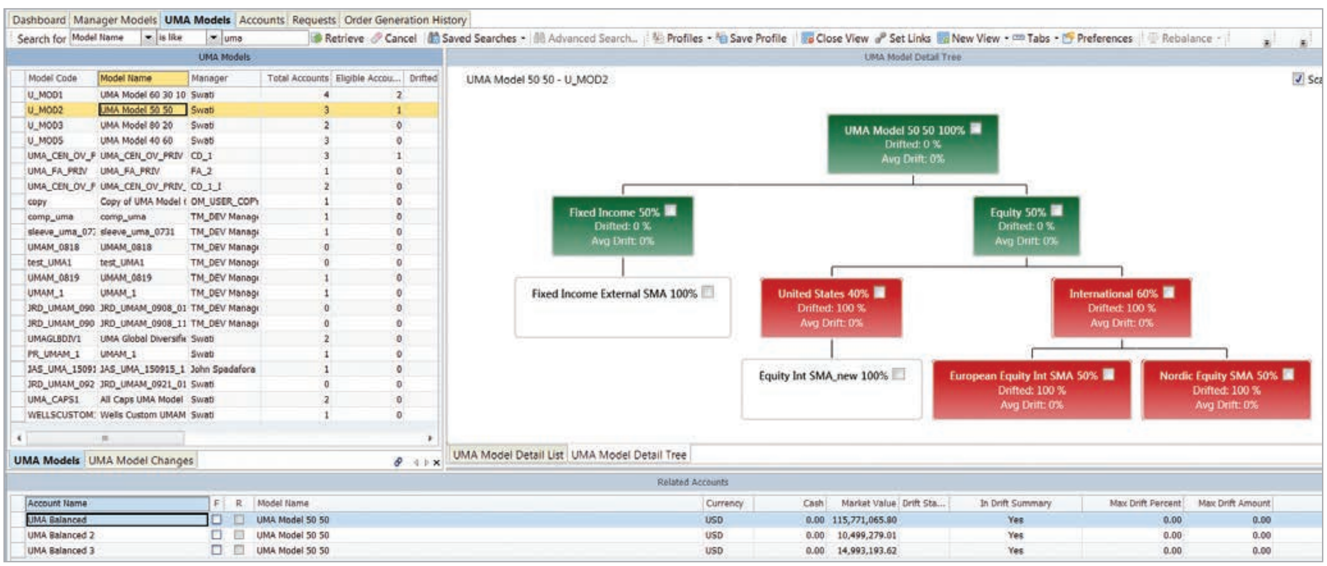
- Manage all discretionary and non-discretionary products on one platform
- Automate and streamline communication with sponsors
- Speed time to market for innovative product offerings
- Streamlined deployment of advisor-driven strategies with centralized portfolio management

Central Overlay

Exception-based workflows for identifying accounts requiring attention

Highly performant managed account overlay functionality

Meets the demanding requirements of high-volume sponsor firms with millions of accounts



Central overlay capabilities facilitate highly scalable management of SMA/UMA products and tax-based trading.

Anywhere / Anytime Access

Browser-based access to portfolio management tools integrated with an order management system for financial advisors, executives and compliance officers

Tablet and phone access to key account information improves engagement with high-touch client relationships

Allows advisors to quickly personalize information for managing complex accounts and client relationships

Increased mobility makes advisors more productive and minimizes lost opportunities for engagement with prospects

Wealth Hub

Enables wealth managers to automate and streamline communication with sponsors

Simple, dashboard based communications

Secure, single-click account and model updates to all applicable sponsors

Streamlines operations by eliminating the need to learn and interact with multiple sponsor platforms

Replaces email exchanges and provides more reliable, auditable transmission of data

Allows managers to offer services to a larger number of sponsors

Helps eliminate low value, error prone manual workflows

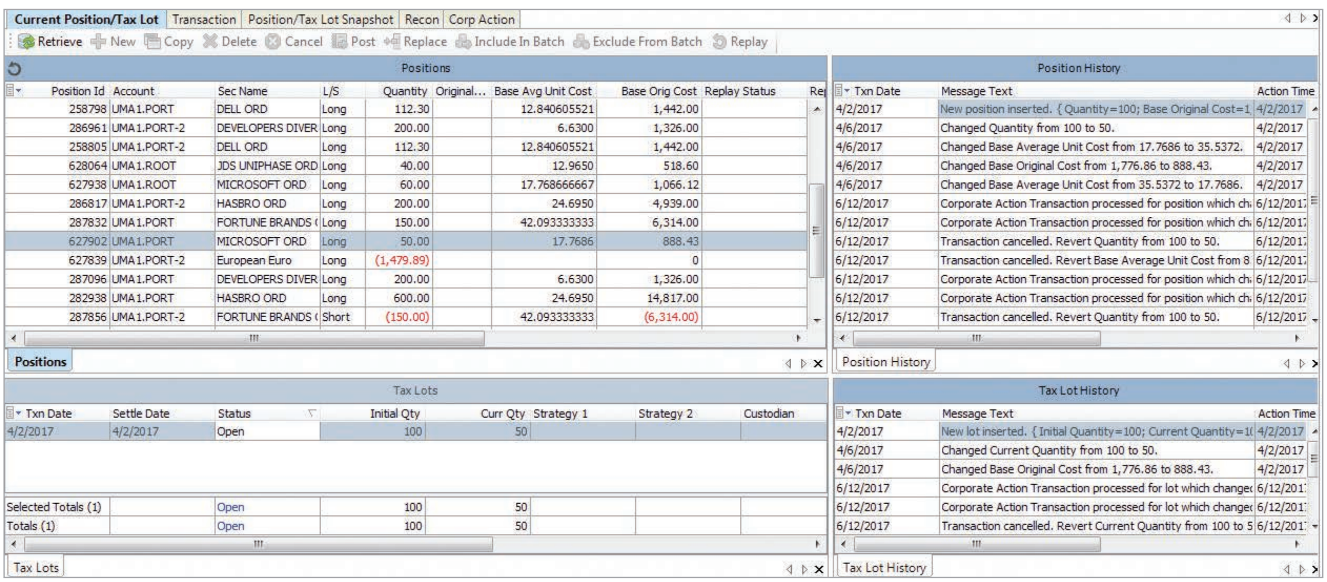
Supports model management, account requests, order workflows and receiving positions and tax lot data from sponsors

Multi-Custodial Position Management and Reconciliation

Provides real-time position management for large volumes of accounts and positions

Critical for managers running sub-advised mandates

Provides an investment-centric view of positions



Review and manage positions and tax lots from the position management dashboard.

Charles River enables sound and efficient investing across all asset classes. Investment firms in more than 40 countries use Charles River IMS to manage more than US$25 Trillion in assets in the institutional investment, wealth management and hedge fund industries. Our Software as a Service-based solution automates and simplifies investment management on a single platform – from portfolio decision support and risk management through trading and post-trade settlement, with integrated risk and compliance throughout. Headquartered in Burlington, Massachusetts, we support clients globally with more than 750 employees in 11 regional offices.

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